

AXIA ENERGY LLC - EBUS  
DONOTMAIL-1430 LARIMER ST STE 400  
DENVER, Colorado

Bulldog 5-14H-789

**FRONTIER/14**

## **Post Job Summary** **Cement Surface Casing**

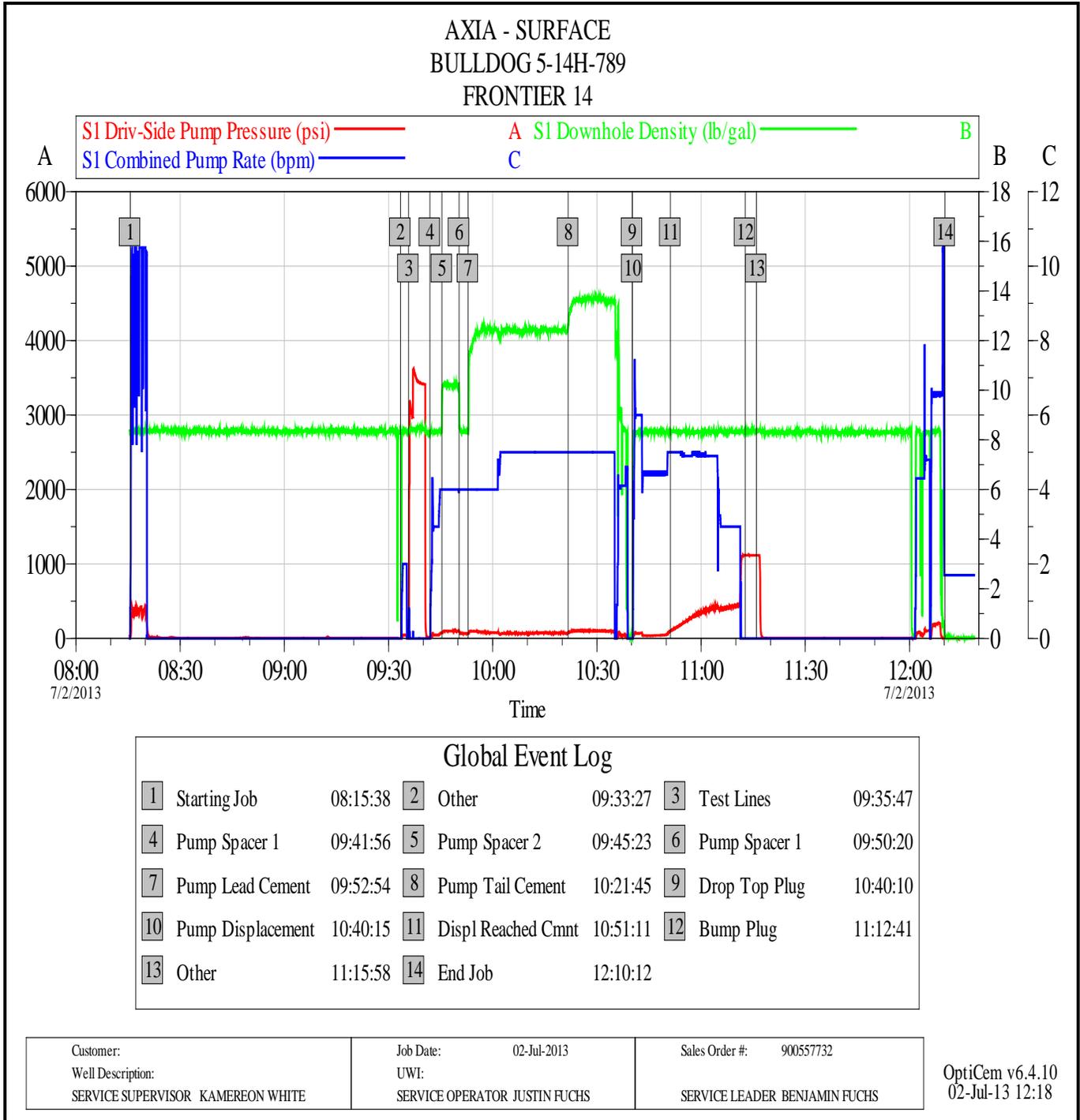
Date Prepared: 7/13/2013  
Version: 1

Service Supervisor: WHITE, KAMEREON

Submitted by: Vernal Engineering

**HALLIBURTON**

## Data Acquisition



# HALLIBURTON

## Service Supervisor Reports

### Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pressure (psig)		Comments
07/02/2013 00:00		Call Out					CREW CALLED
07/02/2013 02:20		Depart Yard Safety Meeting					DISCUSSED CONVOY ORDER AND ANY POTENTIAL HAZARDS
07/02/2013 02:30		Depart from Service Center or Other Site					CALLED IN JOURNEY MANAGEMENT
07/02/2013 05:15		Arrive at Location from Service Center					ARRIVED ON LOCATION
07/02/2013 05:30		Assessment Of Location Safety Meeting					WALKED AROUND AND LOOKED WHERE WE WERE GOING TO SPOT IN EQUIPMENT
07/02/2013 07:00		Casing on Bottom					
07/02/2013 07:20		Pre-Rig Up Safety Meeting					SAFETY OBESERVER GIVEN RESPONSIBILITY
07/02/2013 07:30		Rig-Up Equipment					RIG UP WATER LINES BULK AND IRON
07/02/2013 08:10		Rig-Up Completed					RIGGED UP TO THE RIG FLOOR
07/02/2013 09:00		Pre-Job Safety Meeting					WITH HES EMPLOYEES AND RIG CREW WENT OVER PUMP SCHEDULE
07/02/2013 09:40	3	Test Lines	3	3		3200.0	TEST LINE 3000 PSI
07/02/2013 09:45	4	Pump Water	4	10		84.0	10 BBLS OF FRESH WATER AHEAD
07/02/2013 09:48	5	Pump Spacer	4	20		100.0	PUMP 20 BBLS OF SUPER FLUSH @ 10 # LIQUID
07/02/2013 09:50	6	Pump Water	4	10		114.0	PUMP 10 BBLS OF FRESH WATER BEHIND
07/02/2013 09:52	7	Pump Lead Cement	5	96		125.0	96 BBLS @ 12.3 #, 2.26 Y, 12.61 GAL/SK 72 BBLS MW(240 SKS)
07/02/2013 10:17	8	Pump Tail Cement	5	52		164.0	52 BBLS @ 13.5#, 1.74 Y , 8.68 GAL/SK. 35 BBLS MW (170 SKS)
07/02/2013 11:01		Shutdown					WASH PUMPS & LINES TO THE PIT
07/02/2013 11:02	9	Drop Top Plug					DROP TOP PLUG
07/02/2013 11:03	10	Pump Displacement	4.5	132		470.0	PUMP 144.2 BBLS OF FRESH WATER
07/02/2013 11:04		Slow Rate	3				BEFORE WE BUMP PLUG 2 BPM
07/02/2013 11:05	12	Bump Plug	3	132	1162.0	462.0	BUMP P LUG @ 345 PSI TAKE 500 PSI OVER
07/02/2013 11:06		Check Floats					1 1/4 BBL BACK
07/02/2013 11:20	13	Other					WAITED 40 MIN TO WATCH CEMENT TO SEE IF WE NEEDED TO TOP OUT AS PER CO.MAN
07/02/2013 11:40		Pre-Rig Down Safety Meeting					DISCUSSED POTENTIAL HAZARDS AND TO STAY HYDRATED
07/02/2013 11:50		Rig-Down Equipment					RIG DOWN HES EQUIPMENT
07/02/2013 12:24		Rig-Down Completed					ALL HES EQUIPMENT SECURE AND READY FOR TRANSPORT
07/02/2013 12:24		Depart Location for Service Center or Other Site					CREW LEFT LOCATION AND MADE SURE IT WAS CLEAN AS IT WAS WHEN WE ARRIVED... THANK YOU FOR USING HALLIBURTON .

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 360716	<b>Ship To #:</b> 3007556	<b>Quote #:</b>	<b>Sales Order #:</b> 900557732
<b>Customer:</b> AXIA ENERGY LLC - EBUS		<b>Customer Rep:</b> Peonio, Jess	
<b>Well Name:</b> Bulldog		<b>Well #:</b> 5-14H-789	<b>API/UWI #:</b>
<b>Field:</b>	<b>City (SAP):</b> CRAIG	<b>County/Parish:</b> Moffat	<b>State:</b> Colorado
<b>Legal Description:</b> Section 12 Township 6N Range 93W			
<b>Contractor:</b> FRONTIER		<b>Rig/Platform Name/Num:</b> 14	
<b>Job Purpose:</b> Cement Surface Casing			
<b>Well Type:</b> Exploratory / Wildcat		<b>Job Type:</b> Cement Surface Casing	
<b>Sales Person:</b> SCOTT, KYLE		<b>Srvc Supervisor:</b> WHITE, KAMEREON	<b>MBU ID Emp #:</b> 475856

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
FUCHS, BENJAMIN Reinhard	0.0	470584	FUCHS, JUSTIN Mark	0.0	509124	LAWTON, JOHN	0.0	539747
NELSON, JACOB Hyrum	0.0	529661	TONGI, SIONE Motumanu	0.0	528555	WHITE, KAMEREON V	0.0	475856

### Equipment

HES Unit #	Distance-1 way						
10616259	80 mile	10948687	80 mile	10991613	80 mile	11071461	80 mile
11360879	80 mile	11512092	80 mile	12153735	80 mile		

### Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
<b>TOTAL</b>			<i>Total is the sum of each column separately</i>					

### Job

### Job Times

Formation Name	Formation Depth (MD)	Top	Bottom	Called Out	Date	Time	Time Zone
<b>Form Type</b>			<b>BHST</b>	<b>On Location</b>	02 - Jul - 2013	05:15	MST
<b>Job depth MD</b>	1516. ft		<b>Job Depth TVD</b>	<b>Job Started</b>	02 - Jul - 2013	09:40	MST
<b>Water Depth</b>			<b>Wk Ht Above Floor</b>	<b>Job Completed</b>	02 - Jul - 2013	11:30	MST
<b>Perforation Depth (MD)</b>	<i>From</i>		<i>To</i>	<b>Departed Loc</b>	02 - Jul - 2013	13:30	MST

### Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Surface Open Hole				13.5				.	1500.		
Surface Casing	Unknown		10.75	10.05	40.5		J-55	.	1500.		

### Sales/Rental/3<sup>rd</sup> Party (HES)

Description	Qty	Qty uom	Depth	Supplier
SHOE,FLT,10-3/4 8RD,2-3/4 SSII	1	EA		
CLR,FLOAT,10 3/4 8RD,32.75-55.5#/FT	1	EA		
CTRZR ASSY,API,10 3/4 CSG X 14 3/4 H	10	EA		
CLAMP - LIMIT - 10-3/4 - HINGED -	1	EA		
KIT,HALL WELD-A	1	EA		
Description	Qty	Qty uom	Depth	Supplier

PLUG,CMTG,BOT,10 3/4,HWE,9.09 MIN/10.09	1	EA	
PLUG,CMTG,TOP,10 3/4,HWE,9.09 MIN/10.09	1	EA	

### Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			

### Miscellaneous Materials

Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc %
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size	Qty

### Fluid Data

#### Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Fresh Water		10.00	bbl	8.34	.0	.0	.0	
2	SUPER FLUSH 101	SUPER FLUSH 101 - SBM (12199)	20.00	bbl	10.	.0	.0	.0	
3	Fresh Water		10.00	bbl	8.34	.0	.0	.0	
4	VariCem V1	VARICEM (TM) CEMENT (452009)	240.0	sacks	12.3	2.26	12.61		12.61
	0.125 lbm	POLY-E-FLAKE (101216940)							
	5 lbm	KOL-SEAL, BULK (100064233)							
	12.61 Gal	FRESH WATER							
5	VariCem V1	VARICEM (TM) CEMENT (452009)	170.0	sacks	13.5	1.74	8.68		8.68
	0.125 lbm	POLY-E-FLAKE (101216940)							
	5 lbm	KOL-SEAL, BULK (100064233)							
	8.68 Gal	FRESH WATER							
6	Displacement		143.00	bbl	8.34			.0	
7	HalCem TopOut	HALCEM (TM) SYSTEM (452986)		sacks	15.54	1.19	5.28		5.28
	2 %	CALCIUM CHLORIDE - HI TEST PELLETT (100005053)							
	5.28 Gal	FRESH WATER							

#### Calculated Values

#### Pressures

#### Volumes

Displacement	Shut In: Instant	Lost Returns	Cement Slurry	Pad
Top Of Cement	5 Min	Cement Returns	Actual Displacement	Treatment
Frac Gradient	15 Min	Spacers	Load and Breakdown	Total Job

#### Rates

Circulating	Mixing	Displacement	Avg. Job
Cement Left In Pipe	Amount 40 ft	Reason	Shoe Joint
Frac Ring # 1 @	ID	Frac ring # 2 @	ID
Frac Ring # 3 @	ID	Frac Ring # 4 @	ID

The Information Stated Herein Is Correct	Customer Representative Signature
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# Water Analysis For Cement Mixing Water

Company: AXIA ENERGY LLC - EBUS      Lease:      Well Name, Nbr: Bulldog, 5-14H-789  
Rig Name/Nbr: 14      API No. /UWI  
County: Moffat      State: Colorado      Country: United States of America

## FIELD TEST KIT

**NOTE:** These tests are an indication of POTENTIAL contamination and are not conclusive.  
For more comprehensive results, a sample should be submitted to the Local Area Lab

Date July 02 2013      Ticket Number 900557732  
~~23 May 2013~~  
Service Supervisor WHITE, KAMEREON      Water Source UP-RIGHT

Temperature 87° [80 F]  
pH. 7.7 [between 6-8 pH]  
Specific Gravity 0 [1.000 - 1.005 see Chart]  
Chart in Kit shows comparisons of: Chlorides 0 [<3,000 ppm @ 1.004 S.G.]  
Calcium 0 [<500 ppm @ 1.004 S.G.]

PASS	FAIL	<b><u>Nessler's Nitrogen</u></b>	[Passing Parameters]
<input type="checkbox"/>	<input type="checkbox"/>	Color of Yellow <u>0</u>	[<4.5 ppm (mg/L)]
		<b><u>Tannin-Lignin</u></b>	
<input type="checkbox"/>	<input type="checkbox"/>	Color of Blue <u>0</u>	[<25.0 ppm]
		<b><u>Sulfate</u></b>	
		Degree of Clarity <u>0</u>	[200 ppm]
<input type="checkbox"/>	<input type="checkbox"/>	Black X Visible <u>0</u>	[if NO >200 ppm = FAIL]
		<b><u>Iron (Fe)</u></b>	
<input type="checkbox"/>	<input type="checkbox"/>	Degree of Orange <u>0</u>	[<20.0 ppm]

<b>Sales Order #:</b> 900557732	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 7/2/2013
<b>Customer:</b> AXIA ENERGY LLC - EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b>		<b>API / UWI: (leave blank if unknown)</b> AFEY0IK0XGK4MB5RAAA
<b>Well Name:</b> Bulldog		<b>Well Number:</b> 5-14H-789
<b>Well Type:</b> Exploratory / Wildcat	<b>Well Country:</b> United States of America	
<b>H2S Present:</b>	<b>Well State:</b> Colorado	<b>Well County:</b> Moffat

Dear Customer,

We hope that you were satisfied with the service quality of this job performed by Halliburton. Our aim of our management and service personnel to deliver equipment and service of a standard unmatched in the service sector of the energy industry.

Please take the time to let us know if our performance met with your satisfaction. Please, as possible to ensure we constantly improve our service. Your comments are of great value and are intended for the exclusive use of Halliburton.

### CUSTOMER SATISFACTION SURVEY

CATEGORY	CUSTOMER SATISFACTION RESPONSE	
Survey Conducted Date	The date the survey was conducted	7/2/2013
Survey Interviewer	The survey interviewer is the person who initiated the survey.	KAMEREON WHITE (HB47622)
Customer Participation	Did the customer participate in this survey? (Y/N)	No
Customer Representative	Enter the Customer representative name	
HSE	Was our HSE performance satisfactory? Circle Y or N	
Equipment	Were you satisfied with our Equipment? Circle Y or N	
Personnel	Were you satisfied with our people? Circle Y or N	
Customer Comment	Customer's Comment	

<b>CUSTOMER SIGNATURE</b>
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### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	7/2/2013
The date the survey was conducted	

Cementing KPI Survey	
<b>Type of Job</b>	0
Select the type of job. (Cementing or Non-Cementing)	
<b>Select the Maximum Deviation range for this Job</b>	Vertical
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
<b>Total Operating Time (hours)</b>	7.5
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
<b>HSE Incident, Accident, Injury</b>	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
<b>Was the job purpose achieved?</b>	Yes
Was the job delivered correctly as per customer agreed design?	
<b>Operating Hours (Pumping Hours)</b>	3.5
Total number of hours pumping fluid on this job. Enter in decimal format.	
<b>Customer Non-Productive Rig Time (hrs)</b>	0
Lost time due to Halliburton in the start, execution, or completion of an ordered service or product, or delays in a follow-on service. Enter in decimal format. 0 if none.	
<b>Type of Rig Classification Job Was Performed</b>	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
<b>Number Of JSAs Performed</b>	1
Number Of Jsas Performed	
<b>Number of Unplanned Shutdowns</b>	0
Unplanned shutdown is when injection stops for any period of time.	
<b>Was this a Primary Cement Job (Yes / No)</b>	Yes

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Primary Cement Job= Casing job, Liner job, or Tie-back job.	
<b>Did We Run Wiper Plugs?</b> Did We Run Top And Bottom Casing Wiper Plugs?	Top
<b>Mixing Density of Job Stayed in Designed Density Range (0-100%)</b> Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	98
<b>Was Automated Density Control Used?</b> Was Automated Density Control (ADC) Used ?	Yes
<b>Pump Rate (percent) of Job Stayed At Designed Pump Rate</b> Pump Rate range defined as +/- 1bbl/min. Calculation: Total BBLs of fluid pumped at the designed rate divided by Total BBLs of fluid pumped, multiplied by 100	98
<b>Nbr of Remedial Sqz Jobs Rqd - Competition</b> Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition	0
<b>Nbr of Remedial Plug Jobs Rqd - HES</b> Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
<b>Nbr of Remedial Sqz Jobs Rqd - HES</b> Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0